Information on Concept Paper for Partnerships Dialogue of The Ocean Conference:
3. Minimizing and Addressing Ocean Acidification
Submitted by XPRIZE

Status and Trends

There are certain grand challenges facing humanity where progress and innovation toward a solution is stalled due to either (1) limited commercial motives and incentives driving R&D in the field, or, (2) due to their magnitude, an inability for government or social programs to tackle them. XPRIZE is a non-profit organization based in Los Angeles, California that focuses on using gamification of social impact, crowdsourced innovation, and incentive competitions to solve grand challenges where other more traditional methods may not succeed. An XPRIZE is a highly leveraged, incentivized prize competition that incorporates exponential technologies to push the limits of what is possible and change the world for the better. Using technology as a lever, XPRIZE is committed to helping achieve the goals of the United Nation's SDG 14 through the application of ocean technologies from previous ocean XPRIZE competitions, including ocean pH sensors from the Wendy Schmidt Ocean Health XPRIZE.

Challenges and Opportunities

The Wendy Schmidt Ocean Health XPRIZE was designed to address the appalling lack of data on oceans, particularly in our ability to detect changes in ocean acidification. In July 2015, XPRIZE awarded the $2 million Wendy Schmidt Ocean Health XPRIZE, a prize competition for developing breakthrough ocean pH sensors to improve our understanding of ocean acidification. A number of the competing Teams are now commercially producing state-of-the-art pH sensors, some of which are being deployed globally and on Argo Floats in the southern hemisphere. The opportunity now exists to use these technologies to fully monitor the status of ocean acidification changes across the world's oceans, from the deep-sea to the coast, and in lakes and rivers. However, a challenge still remains in the complete implementation of such a global ocean acidification monitoring system.

Existing Partnerships

XPRIZE is working with partners to deploy more ocean pH sensors and expand ocean acidification monitoring. XPRIZE partnered with the U.S. State Department, the Ocean Foundation, Wendy Schmidt Ocean Health first place winning team Sunburst Sensors, and other groups in the "ApHRICA" project, to run a groundbreaking workshop and pilot project to build capacity and install these cutting-edge ocean pH sensors in Mauritius, Mozambique, the Seychelles and South Africa for the first time. XPRIZE is also working on visualizing and distributing ocean data to a broader audience through the Big Ocean Button Challenge – a competition to turn ocean data into mobile apps – with ocean acidification being one of five categories of the challenge.

Possible Areas for New Partnerships

The goal of the XPRIZE Ocean Initiative is to make the ocean healthy, valued and understood. We are pursuing partnerships to deploy the ocean technologies from XPRIZEs to help solve the ocean's grand challenges, and launch at least two more ocean XPRIZE competitions. Partnerships with government agencies, universities, IGOs and foundations may be developed to: (1) deploy ocean pH sensors for a global ocean acidification monitoring network, with a focus on new regions with sparse ocean acidification information including Small Island Developing States and coastal nations; and, (2) to organize workshops and pilot projects to build local capacity by training researchers and deploying ocean pH sensors. A success state would be every nation with a coastline monitoring ocean pH in local waters by 2030 and sharing these data through the Global Ocean Acidification Observing Network (GOAON).